Gulfstream V - JSC 09/07/19

Aircraft: Gulfstream V - JSC (See full schedule)
Flight Number: GV-40
Payload Configuration: OIB
Nav Data Collected: No
Total Flight Time: 6.1 hours
Submitted by: Debra Willett on 09/07/19
Flight Segments:

From:	BGTL	**To:**	BGTL
Start:	09/07/19 10:52 Z	**Finish:**	09/07/19 16:57 Z
Flight Time:	6.1 hours		
Log Number:	195004	**PI:**	Joseph MacGregor
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Miles Flown:	2700 miles		

Flight Hour Summary:

	195004
Flight Hours Approved in SOFRS	120
Total Used	83.8
Total Remaining	36.2

195004 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
08/19/19	GV-34	Science	3.8	3.8	116.2	1700
08/21/19	GV-35	Transit	0.6	4.4	115.6	300
09/03/19	GV-36	Transit	6.5	10.9	109.1	2800
09/04/19	GV-37	Science	6.7	17.6	102.4	2900
09/05/19	GV-38	Science	6.7	24.3	95.7	2900
09/06/19	GV-39	Science	6.6	30.9	89.1	2900
09/07/19	GV-40	Science	6.1	37	83	2700
09/09/19	GV-41	Science	6.4	43.4	76.6	2800
09/10/19	GV-42	Science	6.8	50.2	69.8	3000
09/11/19	GV-43	Science	6.9	57.1	62.9	3000
09/12/19	GV-44	Science	7.1	64.2	55.8	3100
09/13/19	GV-45	Science	5.8	70	50	2500
09/14/19	GV-46	Science	7.2	77.2	42.8	3100
09/15/19	GV-47	Transit	6.6	83.8	36.2	2900

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB Summer 2019 - Gulfstream V - JSC 09/07/19 Science Report

Mission: OIB Summer 2019
Mission Summary:

[operational_instruments]
ATM

Narrow Swath ATM
FLIR
CAMBOT
Snow Radar
[/operational_instruments]

OUTLOOK FOR MONDAY: Tomorrow, Sunday (09/08/19), is a hard-down day for the OIB team and G-V crew due to a Thule airport closure. However, weather forecasts for Monday are promising for a low-latency sea ice mission, the first of this campaign. This mission will likely take place northeast of Greenland in the Lincoln Sea.

Mission: Northeast Grid 05 Prime
Priority: Low

Today's mission was designed and flown for two reasons: 1) to measure the elevation of the ice sheet along two separate east-west lines that have numerous ICESat-2 crossovers as well as a ground track, and 2) sample areas of Greenland where we have limited information on the bed topography underneath the ice.

Although this land ice mission is only low priority it was our most viable option for today based upon the weather conditions. Forecasts for northern Greenland worsened overnight, with more low clouds than previously predicted, this was backed up with satellite imagery this morning, thus ruling out northern missions with higher priorities. Conditions at Thule were ideal, with no winds and clear skies, for take-off and landing enabling a ramp pass before landing. Through the majority of the mission, clear conditions dominated with some high cirrus clouds, allowing for optimal data collection. On the return to Thule from the Summit ridge line for roughly 150 NM, we did encounter some stratus clouds a few hundred feet above the surface. This caused about 30 minutes of a gap in the ATM data, however the snow radar data was not affected. The majority of the land ice was snow covered with no melt, covered with strastrugi and a few crevasses which were snow filled.

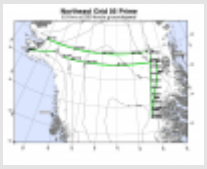
Overall, today's mission was a success, with all instruments preforming well.

ICESat-2 RGT latencies (+/- indicates OIB surveyed after/before ICESat-2):
E0330 (-41 days)

Data volumes collected during today's mission, which consisted of 5.6 hours of data collection:
ATM: 89 Gb
CAMBOT: 167 Gb
FLIR: 12 Gb
Narrow Swath ATM: 125 Gb green
Narrow Swath ATM: 107 Gb IR
VNIR: 41 Gb
SWIR: 64 Gb
Snow Radar: 1.0 Tb

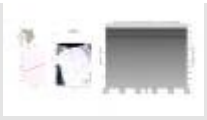
Images:

Figure 1



Read more

FIgure 2



Read more

Figure 3

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Figure 4

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Figure 5

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Submitted by: Linette Boisvert on 09/15/19

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